Individual Proposal Report

Title: Bacterial Treatment of Selenium in the Panoche Drainage (B273)

Geographic Area: San Joaquin Mainstem

Primary Stressor Addressed: Water Quality

Project Type: Implementation

Applicant Type and Name: University. University of California, Berkeley, Professor William Oswald, (510) 231-9438

Funding: The applicant has requested $1,148,326. It is recommended that the full amount be funded.

Cost Share: None

Project Description: The Algal-Bacterial Selenium Removal Facility has been operating for a year in the Panoche Drainage District near Firebaugh. The facility consists of two identical systems in which algae are grown, harvested, and then used as a bacterial substrate for selenium reduction from subsurface agricultural drainage water. Funding of this project will allow the continued operation of the facility for three years. The Panoche Drainage District and Enrico Farms, Inc. are hosting the facility.

ERPP Linkage: The proposal meets the goals of the Ecosystem Restoration Program Plan (CALFED, Volume II, 28 July 1997) as it should help to reduce losses of fish and wildlife from use of pesticides, hydrocarbons, heavy metals, and other pollutants in the basin (page 359).

AFRP Linkage: This proposal contributes toward making all reasonable efforts to at least double natural production of anadromous fish as it supports the following action and evaluation listed in the Revised Draft Restoration Plan for the Anadromous Fish Restoration Program (USFWS, 30 May 1997): (1) Reduce toxic chemical and trace element contamination (Central Valley-wide Action 3, page 107); and (2) Evaluate the benefit of and opportunities for new technologies to improve water quality and to guide migrating fish (Sacramento-San Joaquin Delta Evaluation 7, page 106)

Applicant's Proposed Monitoring: Monitoring is an integral part of this study. Data evaluation will consist of determining the effectiveness of the system for nitrate and selenium removal and determining accurate operational costs for achieving contaminant removal. CALFED staff will review the proposed monitoring plan and revise as necessary.